

Listing of Claims:

Please amend claims 1-6, cancel claims 7-11 without prejudice and add new claims 12-20 as follows.

1. (Amended) An apparatus, comprising:

An array of carbon nanotubes, the array including a first carbon nanotube assembly and a second carbon nanotube assembly, wherein the first carbon nanotube assembly includes

A base,

A substrate mounted on the base,

A carbon nanotube on the substrate,

A housing mounted on the base,

A tracking electrode mounted on the housing,

And

An acceleration electrode mounted on the housing,

And wherein the second carbon nanotube assembly includes

A base,

A substrate mounted on the base,

A carbon nanotube on the substrate,

A housing mounted on the base,

A tracking electrode mounted on the housing,

And

An acceleration electrode mounted on the housing;

And

An electronic controller coupled to the carbon nanotubes of the array of carbon nanotubes
to direct emissions of the carbon nanotubes of the array of carbon nanotubes.

2. (Previously presented) The apparatus of claim 1, wherein:

The array of carbon nanotubes includes a read tube and a tracking tube.

3. (Previously presented) The apparatus of claim 1, wherein:

The array of carbon nanotubes includes a read tube and a write tube.

4. (Previously presented) The apparatus of claim 1, wherein:

The array of carbon nanotubes includes a write tube and a tracking tube.

5. (Previously presented) The apparatus of claim 1, wherein:

The electronic controller controls electrons within heads containing the carbon nanotubes.

6. (Amended) A method of operating a carbon nanotube head with a disk having tracks, comprising:

Locating the carbon nanotube head at a desired track at a rough precision;

Determining an offset for a read head based on the desired track; and

Tracking the track through the read head using the offset;

Feeding back an indication of a location of the desired track at a fine precision;

Adjusting the offset responsive to the feeding back;

Adjusting a target of the carbon nanotube head responsive to the feeding back;

Wherein:

The carbon nanotube head includes a read head, the read head including:

A base,

A substrate mounted on the base,

A carbon nanotube on the substrate,

A housing mounted on the base,

A tracking electrode mounted on the housing,

An acceleration electrode mounted on the housing,

A detection electrode mounted on the housing;

And wherein:

The tracking occurs based on signals received from the detection electrode;

And

The adjusting the target occurs through operation of the tracking electrode.

7-11. (Cancelled without prejudice)

12. (New) The method of claim 6, wherein:

The locating the carbon nanotube head at a desired track at a rough precision occurs through positioning an actuator to which the carbon nanotube head is attached.

13. (New) The method of claim 6, wherein:

The determining an offset for a read head based on the desired track occurs through operation of a controller, the controller coupled to the carbon nanotube head.

14. (New) The method of claim 13, wherein:

The controller determines the offset responsive to an angle of the actuator.

15. (New) The apparatus of claim 1, wherein:

The array of carbon nanotube heads further includes a third carbon nanotube assembly, the third carbon nanotube assembly including:

A base,

A substrate mounted on the base,

A carbon nanotube on the substrate,

A housing mounted on the base,

A tracking electrode mounted on the housing,

And

An acceleration electrode mounted on the housing,

16. (New) The apparatus of claim 15, wherein:

The array of carbon nanotubes includes a read tube, a write tube and a tracking tube, the read tube included in the first carbon nanotube assembly, the write tube included in the second carbon nanotube assembly and the tracking tube included in the third carbon nanotube assembly.

17. (New) An apparatus, comprising:

A disk drive e-beam head including a read head and a write head,

The read head including:

A base,

A substrate mounted on the base,

A carbon nanotube on the substrate,

A housing mounted on the base,

A tracking electrode mounted on the housing,

An acceleration electrode mounted on the housing,

A detection electrode mounted on the housing;

The write head, including:

A base,

A substrate mounted on the base,

A carbon nanotube on the substrate,

A housing mounted on the base,

A tracking electrode mounted on the housing,

An acceleration electrode mounted on the housing;

Wherein the tracking electrode of the write head and the tracking electrode of the read head offset e-beams of the write head and the read head responsive to signals from the detection electrode of the read head.

18. (New) The apparatus as recited in claim 17, wherein:

The e-beam disk drive head is part of an array of nanotubes.

19. (New) The apparatus as recited in claim 17, wherein:

The disk drive e-beam head further includes a tracking head,

The tracking head including:

A base,

A substrate mounted on the base,

A carbon nanotube on the substrate,

A housing mounted on the base,

A tracking electrode mounted on the housing,

An acceleration electrode mounted on the housing,

And

A detection electrode mounted on the housing.

20. (New) The apparatus as recited in claim 17, wherein:

The e-beam head is mounted on an actuator positioned to scan across a rotating surface of a disk.